

REMARKS

In this paper, claims 5 and 35 are currently amended, claims 7, 9 and 39 are re-presented in independent form, and claims 41 and 42 have been added. After the entry of the above amendments, claims 1-42 are pending.

The specification and drawings have been amended to eliminate the use of duplicate reference numbers. The specification also has been amended to provide antecedent basis for the shift mechanism and shift assist mechanism as requested by the examiner. Fig. 6 has been amended so that the lead line for bushing (572) properly terminates in the bushing. The amended Figs. 2, 6, 8, 9 and 11-16 have been submitted as substitute formal drawings.

The office action objects to Fig. 2 as showing the planet gear carrier (550) as a one-piece carrier. Fig. 2 has been amended to clearly indicate first carrier member (554), second carrier member (560) and third carrier member (562). The view of the planet gear carrier (550) in Fig. 2 is the same as the bottom portion of the view shown in Fig. 6. That is, the second carrier member (560) terminates at the right edge of first planet gear (579), and the third carrier member (562) terminates at the left edge of second planet gear (608).

Claims 1-4, 8 and 35-36 were rejected under 35 U.S.C. §102(b) as being anticipated by Bellman, et al (US 5,382,203). This basis for rejection is respectfully traversed.

Bellman, et al disclose a planet gear carrier assembly (10) comprising a hub (12), an annular face plate (14), a plurality of planet gears (16), and a plurality of cylindrical hollow posts (18). The hub (12) includes an annular disc (20) and an axially extending collar (22) integrally attached to the disc (20). The collar (22) has internal teeth (24) that fix collar (22) to a shaft (not shown) so that the collar (22) and shaft rotate as a unit. In other words, hub (12) is incapable of rotation relative to the shaft. Posts (18) function as spacers and have opposite ends that are welded to hub (12) and face plate (14). A plurality of planet gears (16) rotatably mounted on a corresponding plurality of pinion shafts (34) are disposed in gear pockets defined between the hub (12) and face plate (14).

Claim 1 recites a planet gear carrier comprising a first carrier member and a separate second carrier member. The Bellman, et al planet gear carrier comprises the hub (12), annular face plate (14) and posts (18) welded together to form a one-piece structure. In other words, when the Bellman, et al structures have the status of a planet gear carrier (as opposed to an unassembled catalog of parts), there are no separate first and second carrier members. Thus, Bellman, et al neither disclose nor suggest the subject matter currently claimed.

Claims 37-38 were rejected under 35 U.S.C. §103(a) as being unpatentable over Bellman, et al. This basis for rejection is respectfully traversed for the same reasons noted above. Furthermore, it is well known that planetary gear mechanisms used in motor vehicle transmissions are subjected to extreme loads and shocks as the transmission shifts from gear to gear. The effect is particularly severe when accelerating to enter a highway. A planetary gear mechanism constructed of a light alloy most likely would be destroyed in a short time. Clearly, there is no motivation to save a few ounces of weight in a four thousand (or more) pound automobile and risk destruction of the transmission under ordinary operating conditions.

Claim 40 was rejected under 35 U.S.C. §103(a) as being unpatentable over Tabe (US 6,010,425) in view of Bellman, et al. This basis for rejection is respectfully traversed.

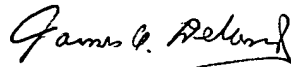
As the office action properly notes, Tabe discloses a planetary gear mechanism mounted within a hub, but Tabe lacks a first carrier member and a second carrier member. The office action then states that it would be obvious to modify the Tabe planet gear carrier by constructing it as a multi-piece planet gear carrier in view of Bellman, et al.. However, as noted above, the Bellman, et al planetary gear carrier comprises the hub (12), annular face plate (14) and posts (18) welded together to form a one-piece structure. Thus, Bellman, et al neither disclose nor suggest the subject matter currently claimed.

As for new claims 41 and 42, those claims each recite the first carrier member axle opening being structured to allow relative rotation between the (hub) axle and the first carrier member and the second carrier member axle opening being structured to allow relative rotation between the (hub) axle and the second carrier member. Bellman, et al's collar (22) has splines (24) that fix the collar

(22) to a shaft, so no rotation of collar (22) relative to the shaft is possible. Thus, Bellman, et al neither disclose nor suggest the subject matter recited in claims 41 and 42.

Accordingly, it is believed that the rejections under 35 U.S.C. §102 and §103 have been overcome by the foregoing amendment and remarks, and it is submitted that the claims are in condition for allowance. Reconsideration of this application as amended is respectfully requested. Allowance of all claims is earnestly solicited.

Respectfully submitted,



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